2023-2024 JCU Study Area Guide

AQUACULTURE

Townsville

STUDY PERIOD 1 (February – June)		STUDY PERIOD 2 (July – November)	
AQ2001:03 Introduction to Aquaculture PREREQ: At least 12 credit points of Level 1 science		AQ2002/AQ5009 PG:03 Aquaculture of Tropical Species PREREQ: At least 12 credit points of Level 1 science	
AQ3002/AQ5002PG:03 Aquaculture: Feeds and Nutrition PREREQ: At least 12 credit points of Level 2 science subjects and 3 credit points of level 2 aquaculture subjects		AQ3007/AQ5007 PG:03 Aquatic Animal Ecophysiology PREREQ: At least 12 Credit Points of level 2 science subjects including at least 3 Credit Points of Aquaculture subjects	
AQ3008/AQ5008 PG:03 Aquaculture: Systems Design PREREQ: At least 12 credit points of Level 2 science subjects and 3 credit points of level 2 aquaculture subjects		BS1001:03 Introduction to B 1 Tf 0(oduc)-8Mlogioi CR1020 & MA	
CH2042:03 Marine Chemistry and Chemical Ecology PREREQ: CH1001-First year chemistry		MB2080/MB5380 PG:03 Invertebrate Biology PREREQ: BS1007-First year plant and animal biology	
MB3150/MB5003 PG:03 Fisheries Science PREREQ: SC2202/SC2209-statistics and BS2460-ecology		PH2006:03 Marine Physics	
MI2031/MI5003 PG:03 Diagnosis of Bacterial Diseases in Aquaculture		MI3031/MI5031 PG:03 Diagnosis of Viral Disease in Aquaculture PREREQ: MI2011-Microbial diversity or BS1001-First year cell biology/genetics	

STUDY PERIOD 3 (Jan-Feb)		STUDY PERIOD 7 (Jun-Jul)		STUDY PERIOD 10 (Nov-Jan)	
AQ3015:03 Sustainable Aquaculture PREREQ: 12 credit points of level 2 subject		AQ3003/AQ5003 PG Aquaculture: Propagation PREREQ: AQ2001 and at least 12 credit points of Level 2 science		AQ3004/AQ5004 PG Aquaculture: Stock Improvement PREREQ: At least 12 credit points of Level 2 science subjects and 3 credit points of level 2 aquaculture subjects	

Field component / Placement

Practical / Laboratory component

Computer Practical or Tutorial

EXTERNAL Only = External offering is the ONLY availability
EXTERNAL Option = Internal and external offerings are both available
PG = Denotes Postgraduate level subjects (i.e. any subject where the 4 digit numerical code begins with '5')

BIOLOGY (Ecology, Zoology and Evolution)

Townsville

STUDY PERIOD 1 (February – June)		STUDY PERIOD 2 (July – November)	
BS1007:03 Introduction to Biodiversity		BS1001:03 Introduction to Biological Processes	
BS2470:03 Evolution PREREQ: BS1001-First year cell biology and genetics		BS2460/BS5460 PG:03 Fundamentals of Ecology PREREQ: 6 credit points of Level 1 or 2 BZ, BS or EV subjects	
BZ2725/BZ5925 PG:03 Australian Terrestrial Diversity PREREQ: BS1007-First year plant and animal biology		SC2202:03 Quantitative Methods in Science* *PREREQ: Intro statistics and RStudio module available immediately upon enrolment at JCU.	
SC2202/SC2209:03 Quantitative Methods in Science* *PREREQ: Intro statistics and RStudio module available immediately upon enrolment at JCU.		MB2080:03 Invertebrate Biology PREREQ: BS1007-First year plant and animal biology	
BZ3215/BZ5215 PG:03 Conservation Biology PREREQ: BS1001-First year cell biology/genetics, BS1007-First year plant and animal biology, and BS2460-ecology. EXTERNAL and/or Limited Subject		BZ3061/BZ5061 PG:03 Behavioural Ecology PREREQ: SC2202/SC2209-statistics and 6 credit points of Level 2 Science	
BZ3235/BZ5235 PG:03 Biological Invasions PREREQ: BS1007-First year plant and animal biology		BZ3220/BZ5220 PG:03 Population and Community Ecology PREREQ: SC2202/SC2209-statistics and BS2460-Ecology.	

BZ3740/BZ5740 PG:03 Wildlife Ecology and Management a5.0 6.48 121.92 452.16 Tm BT 8/MCID 82 >>BDC /TT [(an16 (5220.02 Tc -0.081b6 0 Td [(W)-110.7C

BIOLOGY (Ecology, Zoology and Evolution)

Cairns

STUDY PERIOD 1 (February – June)		STUDY PERIOD 2 (July – November)	
BS1007:03 Introduction to Biodiversity		BS1001:03 Introduction to Biological Processes	
BS2470:03 Evolution PREREQ: BS1001-First year cell biology and genetics		BS2460/BS5460 PG:03 Fundamentals of Ecology PREREQ: 6 credit points of biology and/or environmental science subjects	
BZ2725/BZ5925 PG:03 Australian Terrestrial Diversity PREREQ: BS1007-First year plant and animal biology		SC2202:03 Quantitative Methods in Science* *PREREQ: Intro statistics and RStudio module available immediately upon enrolment at JCU.	
SC2202/SC2209:03 Quantitative Methods in Science* *PREREQ: Intro statistics and RStudio module available immediately upon enrolment at JCU.		BZ3061/BZ5061 PG:03 Behavioural Ecology PREREQ: SC2202/SC2209-statistics and 6 credit points of Level 2 Science	
BZ3215/BZ5215 PG:03 Conservation Biology PREREQ: BS1001-First year cell			

CHEMISTRY

Townsville

STUDY PERIOD 1 (February – June)	

DATA SCIENCE

Cairns

STUDY PERIOD 1 (February – June)		STUDY PERIOD 2 (July – November)	
MA1000:03 Mathematical Foundations PREREQ: MA1020-Preparatory mathematics		MA1580:03 Foundations of Data Science PREREQ: MA1020-Preparatory mathematics	
MA2000:03 Mathematics for Scientists and Engineers PREREQ: MA1003-First year calculus which includes *differential equations and basic linear algebra*		MA2405:03 Advanced Statistical Modelling PREREQ: SC2202/SC2209-statistics and MA1000-First year mathematics	
MA2830:03 Data Visualisation		MA3405:03 Statistical Data Mining for Big Data PREREQ: MA2405-Second year statistics and modelling or MA2000-Intro to multivariate calculus and ordinary and partial differential equations or SC2202/SC2209-statistics	
MA3831:03 Natural Language Processing, Web Scraping and Large Data Processing PREREQ: CP1404-			

BIOINFORMATICS

Cairns

STUDY PERIOD 1 (February – June)	

ENGINEERING -CIVIL

Townsville

STUDY PERIOD 1

(February – June)

CS2001:03 Engineering Strength of Materials

PREREQ: EG1011-Engineering statics and dynamics

CS2002:03 Catchment, Stream and Lake Engineering

ENGINEERING -MECHANICAL

Townsville

STUDY PERIOD 1 (February – June)		STUDY PERIOD 2 (July – November)	
CS2001:03 Engineering Strength of Materials PREREQ: EG1011-Engineering statics and dynamics		EG2010:03 Materials Science and Engineering	
MA2000:03 Mathematics for Scientists and Engineers PREREQ: MA1003-First year calculus which includes			

ENGINEERING -ELECTRICAL & ELECTRONIC ENGINEERING

Townsville

STUDY PERIOD 1 (February – June)		STUDY PERIOD 2 (July – November)	
CC2510:03 Digital Logic and Computing Methods PREREQ: EG1002-Computing and sensors or CP1401-Programming I		CC2511:03 Embedded Systems Design PREREQ: EG1002-Computing and sensors or CP1404-Programming in Python	
MA2000:03 Mathematics for Scientists and Engineers PREREQ: MA1003-First year calculus which includes *differential equations and basic linear algebra*		EE2300:03 Electronics 1 PREREQ: EG1012-Electric Circuits	
PH2019:03 Intro to EM, Optics & Early Quantum PREREQ: (EG1012-Electic circuits or PH1005-Adv stream physics I) and MA1003-First year calculus which includes *differential equations and basic linear algebra*		EE3600:03 Automatic Control 1 PREREQ: EG1012-Electic circuits and MA2000-Intro to multivariate calculus and ordinary and partial differential equations	
EE2201:03 Circuit Theory PREREQ: EG1012-Electic circuits and MA2000-			

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ENVIRONMENTAL SCIENCE, MANAGEMENT & SUSTAINABILITY

Cairns

STUDY PERIOD 1 (February – June)		STUDY PERIOD 2 (July – November)	
EV1005:03 Environmental Processes and Global Change		EV1008:03 Human Geography	
EV1009:03 Introduction to Planning		EV1011:03 Introduction to Sustainability	
EV2301/EV5301 PG:03 Urban Geography and Design PREREQ: At least 12 credit points of level 1 subjects		EV2003/EV5003 PG:03 Introduction to Environmental Economics PREREQ: At least 12 credit points of level 1 subjects MIXED Attendance	

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GEOLOGY & EARTH SCIENCE

Townsville

STUDY PERIOD 1 (February – June)	STUDY PERIOD 2 (July – November)

EA2006/EA5016 PG:03 Hydrology

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INDIGENOUS STUDIES

Townsville

STUDY PERIOD 1 (February – June)		STUDY PERIOD 2 (July – November)	
IA1011/IA5013 [PG]:03 Indigenous Australians EXTERNAL Option (IA1011) EXTERNAL Only (IA5013) IA2022/IA5022 [PG]:03 Aboriginal and		IA1012:03 Indigenous People of North Queensland EXTERNAL Option	

INFORMATION TECHNOLOGY- IT

Cairns

TRIMESTER 1 (January – April)		TRIMESTER 2 (May – August)		TRIMESTER 3 (September – December)	
CP1401/CP5639:03 Problem Solving and Programming I		CP1407:03 Introductory Machine Learning and Data Science		CP1403:03 Design Thinking I	
CP1402/CP5631:03 Internet Fundamentals		CP2405/CP5635 PG:03 Collective Intelligence and Entrepreneurship PREREQ: At least 24 credit points EXTERNAL Option		CP1404:03 Programming II PREREQ: CP1401/CP5639-First year programming	
CP1406/CP5638:03 Web Design and Development		CP3406:03 Mobile Computing PREREQ: CP1404-Programming in Python and 18 credit points of CP subjects)		CP2404/CP5633 PG:03 Database Modelling	
CP2403:03 Information Processing and Visualisation PREREQ: At least 12 credit points of subjects		CP3501:03 Deep Learning		CP2406:03 Programming III PREREQ: CP1404-Programming	

MARINE BIOLOGY

Townsville

STUDY PERIOD 1 (February – June)		STUDY PERIOD 2 (July – November)	
MB2050:03 Functional Biology of Marine Organisms PREREQ: BS1007-First year plant and animal biology		MB1110:03 Introductory Marine Science PREREQ: CH1020-Preparatory Chemistry or equivalent and MA1020-Preparatory Mathematics or equivalent, allow concurrent for CH1020 and MA1020	
MB2070/MB5070 PG:03 Marine Biogeography PREREQ: BS1001-First year cell biology and BS1007-First year plant and animal biology		MB2080/MB5380 PG:03 Invertebrate Biology PREREQ: BS1007-First year plant and animal biology	
MB3050/MB5055 PG:03 Biological Oceanography PREREQ: BS1007-First year plant and animal biology and MB2050-Marine organisms and SC2202/SC2209-statistics		BS2460/BS5460 PG:03 Fundamentals of Ecology PREREQ: 6 credit points of biology and/or environmental science subjects	
MB3150/MB5003 PG:03 Fisheries Science PREREQ: SC2202/SC2209-statistics or BS2460-ecology		MB3190/MB5190 PG:03 Coral Reef Ecology PREREQ: BS2460-ecology	
MB3160/MB5160 PG:03 Evolution and Ecology of Reef Fishes PREREQ: MB2050-Marine organisms and BS2460-ecology and BS2470-Evolution or MB2070-Marine biogeography		MB3200/MB5004 PG:03 Marine Conservation Biology PREREQ: SC2202/SC2209-statistics or BS2460-ecology	
MB3210/MB5400 PG:03 Life History and Evolution of Reef Corals PREREQ: SC2202/SC2209-statistics and BS2460-ecology		MB3270/MB5270 PG:03 Coastal, Estuarine and Mangrove Ecosystems PREREQ: BS1007-First year plant and animal biology and BS2460-ecology and SC2202/SC2209-statistics	

CH2042:03 Marine Chemistry and Chemical Ecology
PREREQ: CH1001-Firsc 0D 877a24 457.2 Tm ( )Tj EMH

MATH

Townsville

STUDY PERIOD 1 (February – June)	STUDY PERIOD 2 (July – November)
MA1000:03 Mathematical Foundations (Tier 2 Univ.)	

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STUDY PERIOD 3 (Jan-Feb)	TRIMESTER 1 (January –

PHYSICS

Townsville

STUDY PERIOD 1 (February – June)		STUDY PERIOD 2 (July – November)	
PH1005:03 Advanced Stream Physics 1 PREREQ: MA1020-Preparatory mathematics or equivalent		PH1001:03 Preparatory Physics	
PH2002:03 Classical Mechanics and Quantum Physics 1 PREREQ: MA1003-First year calculus which includes differential equations and basic linear algebra and PH1005-First year physics and PH1007-First year second semester physics		PH1007:03 Advanced Stream Physics 2 PREREQ: MA1020-Preparatory mathematics or equivalent and PH1005-First year physics	
PH2019:03 Introduction to Electromagnetism Optics and Early Quantum PREREQ: MA1003-First year calculus which includes differential equations and basic linear algebra and (PH1005-First year physics or EG1012-Electric circuits)		PH2006:03 Marine Physics	
PH2023:03 Human Biomechanics 1 PREREQ: PH1001-Preparatory physics or PH1005- First year physics		PH2009:03 Advanced Marine Physics PREREQ: PH1005- First year physics and MA1000-First year mathematics	

SPORTS & EXERCISE SCIENCE

Townsville

STUDY PERIOD 1 (February – June)		STUDY PERIOD 2 (July – November)	
BM1061:03 Anatomy and Physiology for Sport and Exercise Science 1		BM1062:03 Anatomy and Physiology for Sport and Exercise Science 2	
SP1003:03 Communication for Sport and Exercise Science and Exercise Physiology (Clinical)		SP1002:03 Nutrition for Health and Physical	

SC3901: Special Topic 1-UG

An independent study and/or research devoted to a topic not available through structured coursework. The subject is to be developed in consultation with a member of staff from the College of Science and Engineering and the student's course coordinator. To request enrolment in this subject student's should (1) attain approval from a research supervisor (usually an academic or research staff member in the College), (2) identify a project in consultation with the supervisor, and (3) email confirmation from supervisor and a W n BT 1 g /TT1 1 Tf -0.004 Tc 0.is W n1 g / r8 (t)-15.7 (f)8.1 (r)-85.7 (ion wit)(r)-8.4 (om 4.1and t)-15..tuu ofr-(r)1. on witi6048 74d(r)-8.-8.4 (8 (t)-C hnc)-8 (onf) ,4d(r)-8